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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,445	01/10/2002	Leland Bruce Traylor	0032/010321	8614

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EXAMINER

JONES, ROBERT D

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 01/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,445

Applicant(s)

TRAYLOR, LELAND BRUCE

Examiner

Robert D. Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 April 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Abstract

1. The abstract of the disclosure is objected to because of the phrase "is disclosed" in the first sentence, and the phrase "also disclosed" in the last sentence. The Abstract should avoid using phrases that can be implied. Correction is required. See MPEP § 608.01(b).

Drawing Objections

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sucker rods must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification Objections

3. The disclosure is objected to because of the following informalities:

The last 2 sentences of the first full paragraph under Description of the Background Art are not complete sentences.

On page 7, line 22, "clamp" should be --clamps--.

Appropriate correction is required.

4. The disclosure is objected to because of the following informalities: Applicant did not adhere to the standard Specification format for a utility patent application. Specifically, items (g) and (h) (shown in **bold** below), are not disclosed in the standard format.

Appropriate correction is required.

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The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

5. Claims 1 and 12 are objected to because of the following informalities: the only period in a claim should be the period at the end of the claim. Subparts of a claim may be designated by

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alphabetic letters, however, the letters should be in parenthesis, for example --(a)--. Appropriate correction is required. See MPEP 608.01(m).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-11 and 13 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 1, subpart (e) and Claim 13, claim a means to attach a jacket to the single continuous structure automatically as the pump is installed. However, no "means" is shown in the Figures or described in the specification. In paragraph 0021 of the Specification, Applicant briefly addresses the jacket, however, applicant does not describe a means of automatically installing the jacket in such a way that one skilled in the art would know how to make and use the claimed means. Claims 2-11 are rejected as dependent upon Claim 1. No new material may be added.

8. Claims 6 and 7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 6 and 7 are dependent on Claim 1. Claims 6 and 7 claim a suspension means comprising metallic and non-metallic sucker rods, however, Claim 1 includes the limitation that the suspension means is spooled into a reel and played off the reel into a well. It is unclear from

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the specification and the drawings how traditional metallic and non-metallic sucker rods could be spooled into a reel and played off into the well. Note: if claims 6 and 7 were re-written to include all the non-contradictory limitations of the base claim, it is very possible that the resulting method and apparatus would be an independent invention from the preferred embodiment (i.e. restrictable) under See MPEP 806.04. The preferred embodiment comprises a load-bearing support cable, electrical cable, and coiled tubing that are simultaneously spooled off of individual reels and into a well bore. No new material may be added.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 1 recites the limitation "the mechanical cable" in subpart d. There is insufficient antecedent basis for this limitation in the claim.

11. Claims 2 and 3 recite the limitation "the suspension cable." There is insufficient antecedent basis for this limitation in the claims.

12. Claim 12 recites the limitation "the suspension cable, production tubing, and electrical cable to the pump" in sub-part a., and "the flexible production tubing" in subpart d. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 13 recites the limitation "the jacket." There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-2, 4, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,553,590 to Phillips.

In Figure 4, and column 4, lines 5-18, Phillips discloses a single continuous structure 149 engaged to a submersible pump 101 and to all associated loads comprising:

- (a) a mechanical suspension means (metal cable) 103 acting as a primary load bearing element, spooled off a reel 289 in a continuous fashion;
- (b) a flexible tubular conduit 141 capable of conveying fluids from the submersible pump 101 to the surface;
- (c) an unarmored electrical cable 143 capable of conveying power from the pump 101 to the surface;
- (d) a jacket 147 attached to the continuous structure 149 capable of transferring mechanical loads to the metal support cable 103.
- (e) a means attach the jacket 147 to the continuous structure 149. Note: this limitation is read very broadly (See 35 U.S.C. 112 (1) Lack of Enablement rejection (item 6) *supra*).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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17. Claims 3, 5, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips in view of U.S. Patent 5,524,708 to Isaacs.

Phillips discloses the invention as claimed in Claim 1, however, Phillips does not disclose a suspension means that is made out of flexible non-metallic material, a tubular conduit that is plastic, or plastic strengthened with metallic or non-metallic fibers, and an attaching configuration wherein the tubular conduit, electrical cable, and suspension wire that are attached periodically. However, in Figure 1, and column 5, lines 48-55, Isaacs discloses a flexible non-metallic suspension means for suspending periodically attached non-metallic flexible conduit in a well bore. In column 4, lines 63-70, Isaacs indicates that the non-metallic conduit can be comprised of various plastics either alone or reinforced with fibers of other materials such as fiberglass. Isaacs also indicates that laminated or composite construction can be used. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the tubing, and support means disclosed in Phillips to include the periodically attached non-metallic support means, and the plastic and strengthened plastic conduit disclosed in Isaacs. One would have been motivated to make the modification because, in column 3, lines 30-35, Isaacs teaches that non-metallic tubing is lighter, less expensive, and easier to maintain than steel tubing.

18. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips in view of U.S. Patent 4,681,169 to Brookbank.

Phillips discloses the invention as claimed in Claim 1, however, Phillips does not specifically disclose an armored electrical cable. In column 2, lines 10-15, Brookbank discloses an electrical power cable for a submersible pump wherein the electrical cable is armored.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the electrical cable disclosed in Phillips to include the armored cable disclosed in Brookbank. One would have been motivated to make the modification because of the well-known fact that armoring a cable protects the cable from damage and provides increased electrical insulation.

19. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,180,014 to Cox in view of Brookbank. In Figure 1, Cox discloses a method of engaging production tubing and electrical cable to a submersible pump; periodically attaching flexible production tubing and electrical cable with steel retaining clamps starting immediately above the pump; lowering the pump into the well by playing out the flexible production tubing and the electrical cable at the same rate each from a separate reel, and locking the pump at the desired depth. However, Cox does not disclose the use of a separate suspension cable to support the pump. In Figures 1-3, Brookbank discloses a separately reeled support cable 14 deployed in an electrical submersible pump application. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the electrical cord and coiled tubing string disclosed in Cox, to include the a suspension cable as disclosed in Brookbank. One would have been motivated to make the modification because, in Column 3, lines 23-35, Brookbank teaches that, by using separate support and conductor cables, the thermal properties of the electrical power cable do not affect the support cable, and thermal expansion does not apply compressive stresses to the copper conductors of the electrical cable. Note: the limitations of Claim 13 are read very broadly (See 35 U.S.C. 112 (1) Lack of Enablement rejection (item 6) supra).

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20. Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art includes U.S. Patent 5,435,395 to Connell, U.S. Patent 4,621,689 to Brookbank and U.S. Patent 5,528,824 to Anthony, teaching electrical submersible pump applications.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert D. Jones whose telephone number is 703-305-6296. The examiner can normally be reached on 8:30AM - 7 PM Monday through Thursday..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 308-2151. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-3597 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4180.

rdj
January 6, 2003


William Neuder
Primary Examiner

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